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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,468	01/29/2004	Kheng Chiong Tay	07044.0002	3727
22852	7590	08/05/2008		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER REAMES, MATTHEW L.	
			ART UNIT 2893	PAPER NUMBER
			MAIL DATE 08/05/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/766,468

**Applicant(s)**

TAY ET AL.

**Examiner**

MATTHEW L. REAMES

**Art Unit**

2893

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 4/23/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6 and 9-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 9-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102/103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, and 9-25 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hsu in view of Honda (20030178711) or Roberts (previously cited)..

a. As to c claims 1, 10 17-23, under the interpretation protrude means to be outside/uncovered as evidenced by new claims 24 and 25, Hsu teaches an optoelectronic (see e.g. item 20) with element forming the base of the structure (see items 19,16,18), and a opaque plastic (item 30) forming a housing in conjunction with the transparent material (item 51). With the opaque material having a cavity; with the base protruding from the all the middles of the sides and

the bottom (see e.g. fig. 11 and 12), wherein they are not covered by the encapsulant thus the protrude from the encapsulant. Hsu further teaches wherein each of the bases protrude from the bottom and from one of the two other sides (see e.g. fig. 11 and 12) with each base section flush (identical dimensions outside the housing) and one base section larger than the other towards the middle (see fig. 11 and 12) with the optoelectronic component on the larger of the two base sections.

However assuming *arguendo* protrude must mean to extend beyond the surface/to jut out beyond the surface, then Hsu does not teach the a protruding portion.

However Roberts and Honda teach using a protruding portion to dissipate heat (see e.g. Honda item 6 and Roberts item 204).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the devices of Hsu such that all four sides and the bottom portion of the lead frame protrude from the housing.

One would have been so motivated in order to enable heat to be quickly dissipated from the device.

Therefore claims 24 and 25 would also be rejected.

- b. As to claims 2 and 10, Hsu teaches filling the cavity with a transparent resin see item 50).
- c. As to claim 3 and 13, Hsu teaches a wire (see e.g. fig. 12).

- d. As to claim 4 and 14, Hsu mounting (see e.g. item 18) can be used for connecting to external sub-systems such as PCBs. Applicant is reminded this is an intended use and so long as Hsu can perform the claimed feature the claim is anticipated.
- e. As to claim 6, Hsu base material is outside the plastic material (not covered see e.g. figs.).
- f. As to claims 9 and 12, Hsu device has no lead formation (see e.g. figs.).
- g. As to claim 15, Hsu base section can be used for heat dissipation. Applicant is reminded this is an intended use and so long as Hsu can perform the claimed feature the claim is anticipated.
- f. As to claim 16, Hsu teaches the base extending the entire length (see e.g. figs.).

***Response to Arguments***

4. Applicant's arguments filed 4/23/2008 have been fully considered but they are not persuasive. Applicant argues Hsu lead frames are not "protruding" since they are "completely" covered by the housing. This is not found convincing since the method Hsu uses to build the devices would indicate otherwise. Hsu show building and housing an array (see e.g. figs.). Then Hsu teaches cutting the devices to form the device shown in figure 11 and 12. Figures 11 and 12 clearly show the face surfaces and the bottom surface are not covered by the housing (see figs. 11 and 12). Therefore they protrude/extend outside from the housing on the sides and bottom.

5. Further applicant argues that the lead frames do not protrude from the opaque material. This is not found convincing since the claim does not require it to protrude from the opaque material. The claim requires protrusion from the housing.
6. Therefore all rejections are deemed proper and maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW L. REAMES whose telephone number is (571)272-2408. The examiner can normally be reached on M-Th 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Davienne Monbleau can be reached on (571)272-1945. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2893

/MLR/

/Jack Chen/

Primary Examiner, Art Unit 2893